

To demonstrate proper stewardship of Liberty by utilizing multiple effective MOA in a Liberty Link soybean program and support STOP weeds guidelines

Trial ID: 15 LIBPOST Location: F-7 WEST END Trial Year: 2015
 Protocol ID: 15 LIBPOST Investigator: Dr. Mark M. Loux
 Project ID: HP15USAWGB Study Director: Bryan Reeb
 Sponsor Contact: Dave Lamore, Bayer

General Trial Information

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Latitude of LL Corner °: 39.86035 N
Longitude of LL Corner °: 83.67299 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Bryan Reeb

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Credenz 3841 LL
Description: Liberty Link

Planting Rate, Unit: 175000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Soil Temperature, Unit: 70 F
Soil Moisture: GOOD good
Seed Bed: MEDIUM medium

Planting Date: 5-7-2015
Planting Method: PLANTD planted
Planting Equipment: KINZE
Emergence Date: 5-15-2015

Pest Description

- Pest 1 Type:** W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters
- Pest 2 Type:** W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed
- Pest 3 Type:** W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
- Pest 4 Type:** W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest 5 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed
- Pest 6 Type:** W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf
- Pest 7 Type:** W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida
- Pest 8 Type:** W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory
- Pest 9 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed
- Pest10 Type:** W **Code:** XANOR *Xanthium orientale*
Common Name: Common cocklebur
- Pest11 Type:** W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Treated Plot Width: 6.67 FT	Site Type: FIELD field
Treated Plot Length: 30 FT	Experimental Unit: 1 PLOT plot
Treated Plot Area: 200.1 FT2	Treatments: 12
Replications: 3	Tillage Type: CONTIL conventional-till
	Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: F-7 West	Texture: SICL silty clay loam
% OM: 3.1	Soil Name: Kokomo
pH: 7.1	Fert. Level: G good
CEC: 22.2	Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	5-8-2015	6-3-2015	6-18-2015	
Appl. Start Time:	9:00 AM	10:00AM	9:15AM	
Appl. Stop Time:	10:00 AM	10:30 AM	9:30 AM	
Application Method:	SPRAY	SPRAY	SPRAY	
Application Timing:	PRE ATPL	EPO	MPO	
Application Placement:	BROSOI	BROFOL	BROFOL	
Applied By:		Ackley/Lamb	REEB	
Air Temperature, Unit:	73 F	61 F	76 F	
% Relative Humidity:	66	86	75	
Wind Velocity, Unit:	1.3 MPH	4 MPH	4 MPH	
Wind Direction:	S	NNE	WSW	
Dew Presence (Y/N):	N no	Y yes	Y yes	
Soil Temperature, Unit:	61 F	59 F	69 F	
Soil Moisture:	DRY	WET	WET	
% Cloud Cover:	10	100	45	
Next Moisture Occurred On:	5-11-2015	6-5-2015	6-18-2015	
Time to Next Moisture, Unit:	3 DAY	2 DAY	8 HR	

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		BBCH			
Stage Majority, Percent:			12	100	51	100		
Height, Unit:			4	IN	13	IN		
Height Minimum, Maximum:			4	5	12	13		

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:	16	100	18	100
Stage Minimum, Percent:	16	100	18	100
Stage Maximum, Percent:	18	100	18	100
Height, Unit:	2	IN	4	IN
Height Minimum, Maximum:	1	3	4	4
Density, Unit:	8.67 M2			
Pest 2 Code, Type, Scale:	AMARE W	AMARE W	AMARE W	AMARE W
Stage Majority, Percent:	14	100		
Stage Minimum, Percent:	14	100		
Stage Maximum, Percent:	16	100		
Height, Unit:	0.5	IN		
Height Minimum, Maximum:	0.5	2		
Density, Unit:	14.33 M2			
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	19	100	18	100
Stage Minimum, Percent:	14	100	17	100
Stage Maximum, Percent:	19	100	19	100
Height, Unit:	5	IN	24	IN
Height Minimum, Maximum:	3	9	24	24
Density, Unit:	2.33 M2			
Pest 4 Code, Type, Scale:	SETFA W	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:	14	100	14	100
Stage Minimum, Percent:	12	100	14	100
Stage Maximum, Percent:	14	100	14	100
Height, Unit:	5	IN	13.5	IN
Height Minimum, Maximum:	1	8	12	15
Density, Unit:	15.67 M2			
Pest 5 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:	14	100	19	100
Stage Minimum, Percent:	14	100	19	100
Stage Maximum, Percent:	18	100	19	100
Height, Unit:	2	IN	12	IN
Height Minimum, Maximum:	1	4	12	12
Density, Unit:	1.33 M2			
Pest 6 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	12	100		
Stage Minimum, Percent:	12	100		
Stage Maximum, Percent:	16	100		
Height, Unit:	2	IN		
Height Minimum, Maximum:	1	4		
Pest 7 Code, Type, Scale:	SIDSP W	SIDSP W	SIDSP W	SIDSP W
Density, Unit:	1.33 M2			
Pest 8 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W	IPOHE W
Pest 9 Code, Type, Scale:	POLPY W	POLPY W	POLPY W	POLPY W
Density, Unit:	2 M2			
Pest10 Code, Type, Scale:	XANOR W	XANOR W	XANOR W	XANOR W
Stage Majority, Percent:			19	100
Stage Minimum, Percent:			19	100
Stage Maximum, Percent:			19	100
Height, Unit:			12	IN
Height Minimum, Maximum:			12	12
Pest11 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:			22	100
Stage Minimum, Percent:			22	100
Stage Maximum, Percent:			22	100
Height, Unit:			13.5	IN
Height Minimum, Maximum:			12	15

Application Equipment

	A	B	C	D
Appl. Equipment:	6' BACKPACK	6' BACKPACK	10' BACKPACK	
Equipment Type:	BACCAI	BACCAI	BACCAI	
Operation Pressure, Unit:	44 PSI	44 PSI	50 PSI	
Nozzle Type:	AIXR	AIXR	AIXR	
Nozzle Size:	11015	11015	11015	
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN	
Nozzles/Row:	4	4	6	
Boom Length, Unit:	6.67 FT	6.67 FT	10 FT	
Boom Height, Unit:	20 IN	20 IN	20 IN	
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	
Carrier:	WATER	WATER	WATER	
Spray Volume, Unit:	15 gal/ac	15 gal/ac	15 gal/ac	
Mix Size, Unit:	1 liters	1 liters	2 liters	
Propellant:	COMCO2	COMCO2	COMCO2	

Date	By	Notes
7-29-2015		The LPO was as needed per the protocol, no LPO was needed

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Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3
	Pest Type						W Weed SETFA	W Weed AMBTR
	Pest Code						Setaria faberi	Ambrosia trifida
	Pest Scientific Name						Giant foxtail	Giant ragweed
	Pest Name							
	Crop Code				GLXMA			
	BCH Scale				BSOY			
	Crop Scientific Name				Glycine max			
	Crop Name				Soybean			
	Crop Variety				Credezz 3841 LL			
	Description				LL			
	Part Rated				PLANT C			
	Rating Date				6-4-2015	6-4-2015	6-4-2015	6-4-2015
	Rating Type				PHYGEN	CONTRO	CONTRO	CONTRO
	Rating Unit				%	%	%	%
	Number of Subsamples				1	1	1	1
	Days After First/Last Applic.				27 1	27 1	27 1	27 1
	Plant-Eval Interval				28 DP-1	28 DP-1	28 DP-1	28 DP-1
	Days After Emergence				20 DE-1	20 DE-1	20 DE-1	20 DE-1
1	UTC					0.0 a	0.0 c	0.0 b
2	Authority First	6.5 oz/a		A	PRE	0.0 a	70.0 b	63.3 a
2	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
2	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
2	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
2	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
3	Fierce	3.5 oz/a		A	PRE	0.7 a	81.7 ab	50.0 a
3	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
3	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
3	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
3	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
4	Valor XLT @ 3.5 oz/ac					0.3 a	76.7 b	61.7 a
4	Valor SX	2.05 oz/a		A	PRE			
4	Classic	1.45 oz/a		A	PRE			
4	Liberty	29 oz/a		B	EPO <3" WDS			
4	Zidua	2 oz/a		B	EPO <3" WDS			
4	Select Max	9 oz/a		B	EPO <3" WDS			
4	NIS	0.15 qt/a		B	EPO <3" WDS			
4	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
5	Liberty	29 oz/a		B	EPO <3" WDS	0.0 a	0.0 c	0.0 b
5	Prefix	2 pt/a		B	EPO <3" WDS			
5	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
5	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
5	Warrant	3 pt/a		C	MPO 10-14 (da epo)			
5	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
5	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
5	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 10,19,20,22,23,24,26,27,28 because error mean square = 0.

Pest Type		W Weed	W Weed
Pest Code		SETFA	AMBTR
Pest Scientific Name		Setaria faberi	Ambrosia trifi>
Pest Name		Giant foxtail	Giant ragweed
Crop Code	GLXMA		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max		
Crop Name	Soybean		
Crop Variety	Credeuz 3841 LL		
Description	LL		
Part Rated	PLANT C		
Rating Date	6-4-2015	6-4-2015	6-4-2015
Rating Type	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	27 1	27 1	27 1
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	1	2	3
6	Optill Pro					0.3 a	91.7 a	61.7 a
6	OpTill	2 oz/a		A	PRE			
6	Outlook	10 oz/a		A	PRE			
6	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
6	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
6	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac					0.3 a	75.0 b	63.3 a
7	Valor SX	2.24 oz/a		A	PRE			
7	Classic	1.46 oz/a		A	PRE			
7	Thifensulfuron	0.229 oz/a		A	PRE			
7	Liberty	29 oz/a		B	EPO <3" WDS			
7	Outlook	14 oz/a		B	EPO <3" WDS			
7	Select Max	9 oz/a		B	EPO <3" WDS			
7	NIS	0.15 qt/a		B	EPO <3" WDS			
7	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
7	Liberty	29 oz/a		D	LPO (If Needed)			
7	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
8	Liberty	29 oz/a		B	EPO <3" WDS	0.0 a	0.0 c	0.0 b
8	Pursuit	4 oz/a		B	EPO <3" WDS			
8	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
8	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
8	Warrant	3 pt/a		C	MPO 10-14 (da epo)			
8	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
8	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a		A	PRE	0.0 a	81.7 ab	50.0 a
9	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
9	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
9	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Liberty	29 oz/a		D	LPO (If Needed)			
9	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
10	Canopy	3.5 oz/a		A	PRE	0.0 a	71.7 b	53.3 a
10	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
10	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
10	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
10	Liberty	29 oz/a		D	LPO (If Needed)			
10	N-pak ams	1.5 qt/a		D	LPO (If Needed)			

Pest Type		W Weed	W Weed
Pest Code		SETFA	AMBTR
Pest Scientific Name		Setaria faberi	Ambrosia trifida
Pest Name		Giant foxtail	Giant ragweed
Crop Code	GLXMA		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max		
Crop Name	Soybean		
Crop Variety	Credeuz 3841 LL		
Description	LL		
Part Rated	PLANT C		
Rating Date	6-4-2015	6-4-2015	6-4-2015
Rating Type	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	27 1	27 1	27 1
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	1	2	3
11	Authority MAXX	6.4 oz/a		A	PRE	0.0 a	78.3 b	60.0 a
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					0.7 a	70.0 b	53.3 a
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD P=.05						0.62	12.88	17.09
Standard Deviation						0.37	7.61	10.09
CV						188.15	13.11	23.44
Grand Mean						0.19	58.06	43.06
Bartlett's X2						0.0	6.371	6.356
P(Bartlett's X2)						.	0.606	0.499
Skewness						1.6121*	-0.9312*	-0.8172*
Kurtosis						0.6306	-0.7986	-0.9319
Replicate F						1.453	8.433	0.048
Replicate Prob(F)						0.2555	0.0019	0.9535
Treatment F						1.566	65.348	20.546
Treatment Prob(F)						0.1783	0.0001	0.0001

Pest Type				W Weed	W Weed	W Weed		
Pest Code				AMARE	CHEAL	AMBEL		
Pest Scientific Name				Amaranthus ret>	Chenopodium al>	Ambrosia artem>		
Pest Name				Redroot pigweed	Common lambsqu>	Common ragweed		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Crop Variety								
Description								
Part Rated								
Rating Date				6-4-2015	6-4-2015	6-4-2015		
Rating Type				CONTRO	CONTRO	CONTRO		
Rating Unit				%	%	%		
Number of Subsamples				1	1	1		
Days After First/Last Applic.				27 1	27 1	27 1		
Plant-Eval Interval				28 DP-1	28 DP-1	28 DP-1		
Days After Emergence				20 DE-1	20 DE-1	20 DE-1		
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Description	4	5	6
1	UTC					0.0 c	0.0 c	0.0 d
2	Authority First	6.5 oz/a		A	PRE	96.7 ab	96.7 ab	100.0 a
	2 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	2 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	2 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	2 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
3	Fierce	3.5 oz/a		A	PRE	100.0 a	91.7 ab	96.7 ab
	3 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	3 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	3 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	3 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
4	Valor XLT @ 3.5 oz/ac					100.0 a	95.0 ab	95.0 ab
	4 Valor SX	2.05 oz/a		A	PRE			
	4 Classic	1.45 oz/a		A	PRE			
	4 Liberty	29 oz/a		B	EPO <3" WDS			
	4 Zidua	2 oz/a		B	EPO <3" WDS			
	4 Select Max	9 oz/a		B	EPO <3" WDS			
	4 NIS	0.15 qt/a		B	EPO <3" WDS			
	4 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
5	Liberty	29 oz/a		B	EPO <3" WDS	0.0 c	0.0 c	0.0 d
	5 Prefix	2 pt/a		B	EPO <3" WDS			
	5 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	5 Warrant	3 pt/a		C	MPO 10-14 (da epo)			
	5 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	5 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	5 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	CHEAL	AMBEL
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name	Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-4-2015	6-4-2015	6-4-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	27 1	27 1	27 1
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	4	5	6
6	Optill Pro					100.0 a	95.0 ab	93.3 ab
6	OpTill	2 oz/a		A	PRE			
6	Outlook	10 oz/a		A	PRE			
6	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
6	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
6	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac					100.0 a	100.0 a	96.7 ab
7	Valor SX	2.24 oz/a		A	PRE			
7	Classic	1.46 oz/a		A	PRE			
7	Thifensulfuron	0.229 oz/a		A	PRE			
7	Liberty	29 oz/a		B	EPO <3" WDS			
7	Outlook	14 oz/a		B	EPO <3" WDS			
7	Select Max	9 oz/a		B	EPO <3" WDS			
7	NIS	0.15 qt/a		B	EPO <3" WDS			
7	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
7	Liberty	29 oz/a		D	LPO (If Needed)			
7	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
8	Liberty	29 oz/a		B	EPO <3" WDS	0.0 c	0.0 c	0.0 d
8	Pursuit	4 oz/a		B	EPO <3" WDS			
8	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
8	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
8	Warrant	3 pt/a		C	MPO 10-14 (da epo)			
8	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
8	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a		A	PRE	98.3 ab	98.3 ab	81.7 c
9	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
9	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
9	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Liberty	29 oz/a		D	LPO (If Needed)			
9	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
10	Canopy	3.5 oz/a		A	PRE	98.3 ab	98.3 ab	98.3 a
10	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
10	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
10	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
10	Liberty	29 oz/a		D	LPO (If Needed)			
10	N-pak ams	1.5 qt/a		D	LPO (If Needed)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	CHEAL	AMBEL
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name	Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-4-2015	6-4-2015	6-4-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	27 1	27 1	27 1
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	4	5	6
11	Authority MAXX	6.4 oz/a		A	PRE	95.0 ab	98.3 ab	88.3 bc
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					86.7 b	90.0 b	98.3 a
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD P=.05						12.44	9.71	8.55
Standard Deviation						7.35	5.74	5.05
CV						10.08	7.97	7.14
Grand Mean						72.92	71.94	70.69
Bartlett's X2						12.677	14.948	6.789
P(Bartlett's X2)						0.013*	0.021*	0.451
Skewness						-1.1337*	-1.1552*	-1.1211*
Kurtosis						-0.6906	-0.6435	-0.6686
Replicate F						0.270	0.148	3.050
Replicate Prob(F)						0.7657	0.8635	0.0678
Treatment F						108.214	172.415	216.681
Treatment Prob(F)						0.0001	0.0001	0.0001

Pest Type				W Weed	W Weed	W Weed		
Pest Code				POLPY	ABUTH	SIDSP		
Pest Scientific Name				Persicaria pen>	Abutilon theop>	Sida spinosa		
Pest Name				Pennsylvania s>	velvetleaf	Prickly sida		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Crop Variety								
Description								
Part Rated								
Rating Date				6-4-2015	6-4-2015	6-4-2015		
Rating Type				CONTRO	CONTRO	CONTRO		
Rating Unit				%	%	%		
Number of Subsamples				1	1	1		
Days After First/Last Applic.				27 1	27 1	27 1		
Plant-Eval Interval				28 DP-1	28 DP-1	28 DP-1		
Days After Emergence				20 DE-1	20 DE-1	20 DE-1		
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description			
						7	8	9
1	UTC					0.0 c	0.0 b	0.0 c
2	Authority First	6.5 oz/a		A	PRE	96.7 a	96.7 a	100.0 a
	2 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	2 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	2 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	2 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
3	Fierce	3.5 oz/a		A	PRE	86.7 ab	93.3 a	100.0 a
	3 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	3 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	3 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	3 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
4	Valor XLT @ 3.5 oz/ac					100.0 a	96.7 a	98.3 ab
	4 Valor SX	2.05 oz/a		A	PRE			
	4 Classic	1.45 oz/a		A	PRE			
	4 Liberty	29 oz/a		B	EPO <3" WDS			
	4 Zidua	2 oz/a		B	EPO <3" WDS			
	4 Select Max	9 oz/a		B	EPO <3" WDS			
	4 NIS	0.15 qt/a		B	EPO <3" WDS			
	4 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
5	Liberty	29 oz/a		B	EPO <3" WDS	0.0 c	0.0 b	0.0 c
	5 Prefix	2 pt/a		B	EPO <3" WDS			
	5 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	5 Warrant	3 pt/a		C	MPO 10-14 (da epo)			
	5 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	5 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	5 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	ABUTH	SIDSP
Pest Scientific Name	Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name	Pennsylvania s>	velvetleaf	Prickly sida
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-4-2015	6-4-2015	6-4-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	27 1	27 1	27 1
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	7	8	9
6	Optill Pro						98.3 a	95.0 a	100.0 a
6	OpTill	2 oz/a			A	PRE			
6	Outlook	10 oz/a			A	PRE			
6	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
6	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
6	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac						98.3 a	100.0 a	98.3 ab
7	Valor SX	2.24 oz/a			A	PRE			
7	Classic	1.46 oz/a			A	PRE			
7	Thifensulfuron	0.229 oz/a			A	PRE			
7	Liberty	29 oz/a			B	EPO <3" WDS			
7	Outlook	14 oz/a			B	EPO <3" WDS			
7	Select Max	9 oz/a			B	EPO <3" WDS			
7	NIS	0.15 qt/a			B	EPO <3" WDS			
7	N-pak ams	1.5 qt/a			B	EPO <3" WDS			
7	Liberty	29 oz/a			D	LPO (If Needed)			
7	N-pak ams	1.5 qt/a			D	LPO (If Needed)			
8	Liberty	29 oz/a			B	EPO <3" WDS	0.0 c	0.0 b	0.0 c
8	Pursuit	4 oz/a			B	EPO <3" WDS			
8	N-pak ams	1.5 qt/a			B	EPO <3" WDS			
8	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
8	Warrant	3 pt/a			C	MPO 10-14 (da epo)			
8	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
8	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a			A	PRE	93.3 ab	98.3 a	93.3 ab
9	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
9	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
9	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
9	Liberty	29 oz/a			D	LPO (If Needed)			
9	N-pak ams	1.5 qt/a			D	LPO (If Needed)			
10	Canopy	3.5 oz/a			A	PRE	95.0 a	98.3 a	96.7 ab
10	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
10	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
10	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
10	Liberty	29 oz/a			D	LPO (If Needed)			
10	N-pak ams	1.5 qt/a			D	LPO (If Needed)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	ABUTH	SIDSP
Pest Scientific Name	Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name	Pennsylvania s>	velvetleaf	Prickly sida
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-4-2015	6-4-2015	6-4-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	27 1	27 1	27 1
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	7	8	9
11	Authority MAXX	6.4 oz/a		A	PRE	90.0 ab	95.0 a	97.7 ab
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					80.0 b	93.3 a	91.7 b
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
	LSD P=.05					13.98	8.71	7.14
	Standard Deviation					8.25	5.14	4.22
	CV					11.81	7.12	5.78
	Grand Mean					69.86	72.22	73.00
	Bartlett's X2					15.472	5.381	5.91
	P(Bartlett's X2)					0.017*	0.614	0.315
	Skewness					-1.0814*	-1.1636*	-1.1737*
	Kurtosis					-0.7608	-0.625	-0.6164
	Replicate F					1.356	1.286	0.131
	Replicate Prob(F)					0.2784	0.2962	0.8777
	Treatment F					79.528	215.561	327.925
	Treatment Prob(F)					0.0001	0.0001	0.0001

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Description	10	11	12
	1 UTC					0.0 a	0.0 e	0.0 d
	2 Authority First	6.5 oz/a		A	PRE	0.0 a	65.0 d	58.3 b
	2 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	2 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	2 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	2 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
	3 Fierce	3.5 oz/a		A	PRE	0.0 a	83.3 abc	43.3 bc
	3 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	3 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	3 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	3 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
	4 Valor XLT @ 3.5 oz/ac					0.0 a	97.0 a	91.7 a
	4 Valor SX	2.05 oz/a		A	PRE			
	4 Classic	1.45 oz/a		A	PRE			
	4 Liberty	29 oz/a		B	EPO <3" WDS			
	4 Zidua	2 oz/a		B	EPO <3" WDS			
	4 Select Max	9 oz/a		B	EPO <3" WDS			
	4 NIS	0.15 qt/a		B	EPO <3" WDS			
	4 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		B	EPO <3" WDS	0.0 a	83.3 abc	96.7 a
	5 Prefix	2 pt/a		B	EPO <3" WDS			
	5 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	5 Warrant	3 pt/a		C	MPO 10-14 (da epo)			
	5 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	5 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	5 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

Pest Type		W Weed	W Weed
Pest Code		SETFA	AMBTR
Pest Scientific Name		Setaria faberi	Ambrosia trifi>
Pest Name		Giant foxtail	Giant ragweed
Crop Code	GLXMA		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max		
Crop Name	Soybean		
Crop Variety	Credeuz 3841 LL		
Description	LL		
Part Rated	PLANT C		
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	41 15	41 15	41 15
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1
Days After Emergence	34 DE-1	34 DE-1	34 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Description	10	11	12
6	Optill Pro						0.0 a	93.3 ab	56.7 b
6	OpTill	2 oz/a		A		PRE			
6	Outlook	10 oz/a		A		PRE			
6	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
6	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
6	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac						0.0 a	96.7 a	95.0 a
7	Valor SX	2.24 oz/a		A		PRE			
7	Classic	1.46 oz/a		A		PRE			
7	Thifensulfuron	0.229 oz/a		A		PRE			
7	Liberty	29 oz/a		B		EPO <3" WDS			
7	Outlook	14 oz/a		B		EPO <3" WDS			
7	Select Max	9 oz/a		B		EPO <3" WDS			
7	NIS	0.15 qt/a		B		EPO <3" WDS			
7	N-pak ams	1.5 qt/a		B		EPO <3" WDS			
7	Liberty	29 oz/a		D		LPO (If Needed)			
7	N-pak ams	1.5 qt/a		D		LPO (If Needed)			
8	Liberty	29 oz/a		B		EPO <3" WDS	0.0 a	91.0 ab	86.7 a
8	Pursuit	4 oz/a		B		EPO <3" WDS			
8	N-pak ams	1.5 qt/a		B		EPO <3" WDS			
8	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
8	Warrant	3 pt/a		C		MPO 10-14 (da epo)			
8	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
8	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a		A		PRE	0.0 a	81.7 a-d	40.0 c
9	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
9	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
9	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
9	Liberty	29 oz/a		D		LPO (If Needed)			
9	N-pak ams	1.5 qt/a		D		LPO (If Needed)			
10	Canopy	3.5 oz/a		A		PRE	0.0 a	71.7 cd	46.7 bc
10	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
10	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
10	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
10	Liberty	29 oz/a		D		LPO (If Needed)			
10	N-pak ams	1.5 qt/a		D		LPO (If Needed)			

Pest Type		W Weed	W Weed
Pest Code		SETFA	AMBTR
Pest Scientific Name		Setaria faberi	Ambrosia trifida
Pest Name		Giant foxtail	Giant ragweed
Crop Code	GLXMA		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max		
Crop Name	Soybean		
Crop Variety	Credezz 3841 LL		
Description	LL		
Part Rated	PLANT C		
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	41 15	41 15	41 15
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1
Days After Emergence	34 DE-1	34 DE-1	34 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	10	11	12
11	Authority MAXX	6.4 oz/a		A	PRE	0.0 a	73.3 cd	46.7 bc
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					0.0 a	76.7 bcd	46.7 bc
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD P=.05						.	17.25	16.00
Standard Deviation						0.00	10.19	9.45
CV						0.0	13.39	16.01
Grand Mean						0.00	76.08	59.03
Bartlett's X2						0.0	15.843	11.464
P(Bartlett's X2)						.	0.104	0.323
Skewness						.	-1.9198*	-0.3067
Kurtosis						.	3.2958*	-0.5351
Replicate F						0.000	5.269	0.194
Replicate Prob(F)						1.0000	0.0135	0.8248
Treatment F						0.000	19.604	27.773
Treatment Prob(F)						1.0000	0.0001	0.0001

Pest Type				W Weed	W Weed	W Weed
Pest Code				AMARE	CHEAL	AMBEL
Pest Scientific Name				Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name				Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Crop Variety						
Description						
Part Rated						
Rating Date				6-18-2015	6-18-2015	6-18-2015
Rating Type				CONTRO	CONTRO	CONTRO
Rating Unit				%	%	%
Number of Subsamples				1	1	1
Days After First/Last Applic.				41 15	41 15	41 15
Plant-Eval Interval				42 DP-1	42 DP-1	42 DP-1
Days After Emergence				34 DE-1	34 DE-1	34 DE-1
Trt Treatment	Other	Other	Appl			
No. Name	Rate	Rate	Unit Code Description	13	14	15
1 UTC				0.0 c	0.0 e	0.0 e
2 Authority First	6.5 oz/a		A PRE	96.7 a	100.0 a	95.0 ab
2 Liberty	29 oz/a		C MPO 10-14 (da epo)			
2 Select Max	9 oz/a		C MPO 10-14 (da epo)			
2 NIS	0.15 qt/a		C MPO 10-14 (da epo)			
2 N-pak ams	1.5 qt/a		C MPO 10-14 (da epo)			
3 Fierce	3.5 oz/a		A PRE	100.0 a	93.3 ab	93.3 ab
3 Liberty	29 oz/a		C MPO 10-14 (da epo)			
3 Select Max	9 oz/a		C MPO 10-14 (da epo)			
3 NIS	0.15 qt/a		C MPO 10-14 (da epo)			
3 N-pak ams	1.5 qt/a		C MPO 10-14 (da epo)			
4 Valor XLT @ 3.5 oz/ac				100.0 a	99.3 a	100.0 a
4 Valor SX	2.05 oz/a		A PRE			
4 Classic	1.45 oz/a		A PRE			
4 Liberty	29 oz/a		B EPO <3" WDS			
4 Zidua	2 oz/a		B EPO <3" WDS			
4 Select Max	9 oz/a		B EPO <3" WDS			
4 NIS	0.15 qt/a		B EPO <3" WDS			
4 N-pak ams	1.5 qt/a		B EPO <3" WDS			
5 Liberty	29 oz/a		B EPO <3" WDS	85.0 b	73.3 cd	93.3 ab
5 Prefix	2 pt/a		B EPO <3" WDS			
5 N-pak ams	1.5 qt/a		B EPO <3" WDS			
5 Liberty	29 oz/a		C MPO 10-14 (da epo)			
5 Warrant	3 pt/a		C MPO 10-14 (da epo)			
5 Select Max	9 oz/a		C MPO 10-14 (da epo)			
5 NIS	0.15 qt/a		C MPO 10-14 (da epo)			
5 N-pak ams	1.5 qt/a		C MPO 10-14 (da epo)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	CHEAL	AMBEL
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name	Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	41 15	41 15	41 15
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1
Days After Emergence	34 DE-1	34 DE-1	34 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	13	14	15
6	Optill Pro					100.0 a	91.7 ab	91.7 abc
6	OpTill	2 oz/a		A	PRE			
6	Outlook	10 oz/a		A	PRE			
6	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
6	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
6	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac					100.0 a	100.0 a	100.0 a
7	Valor SX	2.24 oz/a		A	PRE			
7	Classic	1.46 oz/a		A	PRE			
7	Thifensulfuron	0.229 oz/a		A	PRE			
7	Liberty	29 oz/a		B	EPO <3" WDS			
7	Outlook	14 oz/a		B	EPO <3" WDS			
7	Select Max	9 oz/a		B	EPO <3" WDS			
7	NIS	0.15 qt/a		B	EPO <3" WDS			
7	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
7	Liberty	29 oz/a		D	LPO (If Needed)			
7	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
8	Liberty	29 oz/a		B	EPO <3" WDS	81.7 b	68.3 d	85.0 bc
8	Pursuit	4 oz/a		B	EPO <3" WDS			
8	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
8	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
8	Warrant	3 pt/a		C	MPO 10-14 (da epo)			
8	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
8	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a		A	PRE	100.0 a	96.7 ab	70.0 d
9	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
9	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
9	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Liberty	29 oz/a		D	LPO (If Needed)			
9	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
10	Canopy	3.5 oz/a		A	PRE	99.3 a	96.7 ab	90.0 abc
10	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
10	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
10	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
10	Liberty	29 oz/a		D	LPO (If Needed)			
10	N-pak ams	1.5 qt/a		D	LPO (If Needed)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	CHEAL	AMBEL
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name	Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	41 15	41 15	41 15
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1
Days After Emergence	34 DE-1	34 DE-1	34 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	13	14	15
11	Authority MAXX	6.4 oz/a		A	PRE	91.7 ab	100.0 a	78.3 cd
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					90.0 ab	86.0 bc	100.0 a
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD P=.05						10.46	13.27	13.38
Standard Deviation						6.18	7.84	7.90
CV						7.1	9.36	9.51
Grand Mean						87.03	83.78	83.06
Bartlett's X2						12.44	16.493	2.98
P(Bartlett's X2)						0.029*	0.021*	0.887
Skewness						-2.7206*	-2.277*	-2.3272*
Kurtosis						6.4901*	4.6116*	4.9247*
Replicate F						1.489	0.544	3.148
Replicate Prob(F)						0.2476	0.5879	0.0628
Treatment F						62.371	39.453	36.833
Treatment Prob(F)						0.0001	0.0001	0.0001

Pest Type				W Weed	W Weed	W Weed		
Pest Code				POLPY	ABUTH	SIDSP		
Pest Scientific Name				Persicaria pen>	Abutilon theop>	Sida spinosa		
Pest Name				Pennsylvania s>	velvetleaf	Prickly sida		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Crop Variety								
Description								
Part Rated								
Rating Date				6-18-2015	6-18-2015	6-18-2015		
Rating Type				CONTRO	CONTRO	CONTRO		
Rating Unit				%	%	%		
Number of Subsamples				1	1	1		
Days After First/Last Applic.				41 15	41 15	41 15		
Plant-Eval Interval				42 DP-1	42 DP-1	42 DP-1		
Days After Emergence				34 DE-1	34 DE-1	34 DE-1		
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description			
1	UTC					0.0 d	0.0 b	0.0 d
2	Authority First	6.5 oz/a		A	PRE	95.0 abc	100.0 a	98.3 ab
	2 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	2 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	2 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	2 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
3	Fierce	3.5 oz/a		A	PRE	93.3 abc	91.7 a	100.0 a
	3 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	3 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	3 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	3 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
4	Valor XLT @ 3.5 oz/ac					100.0 a	100.0 a	100.0 a
	4 Valor SX	2.05 oz/a		A	PRE			
	4 Classic	1.45 oz/a		A	PRE			
	4 Liberty	29 oz/a		B	EPO <3" WDS			
	4 Zidua	2 oz/a		B	EPO <3" WDS			
	4 Select Max	9 oz/a		B	EPO <3" WDS			
	4 NIS	0.15 qt/a		B	EPO <3" WDS			
	4 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
5	Liberty	29 oz/a		B	EPO <3" WDS	100.0 a	96.7 a	90.0 c
	5 Prefix	2 pt/a		B	EPO <3" WDS			
	5 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	5 Warrant	3 pt/a		C	MPO 10-14 (da epo)			
	5 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	5 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	5 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	ABUTH	SIDSP
Pest Scientific Name	Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name	Pennsylvania s>	velvetleaf	Prickly sida
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	41 15	41 15	41 15
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1
Days After Emergence	34 DE-1	34 DE-1	34 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	16	17	18
6	Optill Pro						96.7 ab	95.0 a	96.7 abc
6	OpTill	2 oz/a			A	PRE			
6	Outlook	10 oz/a			A	PRE			
6	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
6	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
6	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac						100.0 a	100.0 a	100.0 a
7	Valor SX	2.24 oz/a			A	PRE			
7	Classic	1.46 oz/a			A	PRE			
7	Thifensulfuron	0.229 oz/a			A	PRE			
7	Liberty	29 oz/a			B	EPO <3" WDS			
7	Outlook	14 oz/a			B	EPO <3" WDS			
7	Select Max	9 oz/a			B	EPO <3" WDS			
7	NIS	0.15 qt/a			B	EPO <3" WDS			
7	N-pak ams	1.5 qt/a			B	EPO <3" WDS			
7	Liberty	29 oz/a			D	LPO (If Needed)			
7	N-pak ams	1.5 qt/a			D	LPO (If Needed)			
8	Liberty	29 oz/a			B	EPO <3" WDS	90.0 bc	100.0 a	91.7 bc
8	Pursuit	4 oz/a			B	EPO <3" WDS			
8	N-pak ams	1.5 qt/a			B	EPO <3" WDS			
8	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
8	Warrant	3 pt/a			C	MPO 10-14 (da epo)			
8	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
8	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a			A	PRE	86.7 c	98.3 a	100.0 a
9	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
9	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
9	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
9	Liberty	29 oz/a			D	LPO (If Needed)			
9	N-pak ams	1.5 qt/a			D	LPO (If Needed)			
10	Canopy	3.5 oz/a			A	PRE	96.7 ab	98.3 a	96.7 abc
10	Liberty	29 oz/a			C	MPO 10-14 (da epo)			
10	Select Max	9 oz/a			C	MPO 10-14 (da epo)			
10	NIS	0.15 qt/a			C	MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a			C	MPO 10-14 (da epo)			
10	Liberty	29 oz/a			D	LPO (If Needed)			
10	N-pak ams	1.5 qt/a			D	LPO (If Needed)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	ABUTH	SIDSP
Pest Scientific Name	Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name	Pennsylvania s>	velvetleaf	Prickly sida
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	41 15	41 15	41 15
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1
Days After Emergence	34 DE-1	34 DE-1	34 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	16	17	18
11	Authority MAXX	6.4 oz/a		A	PRE	96.7 ab	100.0 a	93.3 abc
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					91.7 abc	96.7 a	95.0 abc
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD P=.05						9.66	8.65	6.98
Standard Deviation						5.70	5.11	4.12
CV						6.54	5.69	4.66
Grand Mean						87.22	89.72	88.47
Bartlett's X2						2.126	7.372	1.589
P(Bartlett's X2)						0.953	0.194	0.903
Skewness						-2.8612*	-2.9906*	-2.9876*
Kurtosis						7.1689*	7.6644*	7.7122*
Replicate F						2.072	1.145	0.286
Replicate Prob(F)						0.1498	0.3364	0.7538
Treatment F						71.223	92.620	139.223
Treatment Prob(F)						0.0001	0.0001	0.0001

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Description	19	20	21
	1 UTC					0.0 a	0.0 b	0.0 d
	2 Authority First	6.5 oz/a		A	PRE	0.0 a	100.0 a	100.0 a
	2 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	2 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	2 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	2 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
	3 Fierce	3.5 oz/a		A	PRE	0.0 a	100.0 a	100.0 a
	3 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	3 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	3 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	3 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
	4 Valor XLT @ 3.5 oz/ac					0.0 a	100.0 a	86.0 c
	4 Valor SX	2.05 oz/a		A	PRE			
	4 Classic	1.45 oz/a		A	PRE			
	4 Liberty	29 oz/a		B	EPO <3" WDS			
	4 Zidua	2 oz/a		B	EPO <3" WDS			
	4 Select Max	9 oz/a		B	EPO <3" WDS			
	4 NIS	0.15 qt/a		B	EPO <3" WDS			
	4 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		B	EPO <3" WDS	0.0 a	100.0 a	100.0 a
	5 Prefix	2 pt/a		B	EPO <3" WDS			
	5 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	5 Warrant	3 pt/a		C	MPO 10-14 (da epo)			
	5 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	5 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	5 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

Pest Type		W Weed	W Weed
Pest Code		SETFA	AMBTR
Pest Scientific Name		Setaria faberi	Ambrosia trifi>
Pest Name		Giant foxtail	Giant ragweed
Crop Code	GLXMA		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max		
Crop Name	Soybean		
Crop Variety	Credeuz 3841 LL		
Description	LL		
Part Rated	PLANT C		
Rating Date	7-7-2015	7-7-2015	7-7-2015
Rating Type	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	60 19	60 19	60 19
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1
Days After Emergence	53 DE-1	53 DE-1	53 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Description	19	20	21
6	Optill Pro						0.0 a	100.0 a	100.0 a
6	OpTill	2 oz/a		A		PRE			
6	Outlook	10 oz/a		A		PRE			
6	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
6	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
6	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac						0.0 a	100.0 a	91.7 b
7	Valor SX	2.24 oz/a		A		PRE			
7	Classic	1.46 oz/a		A		PRE			
7	Thifensulfuron	0.229 oz/a		A		PRE			
7	Liberty	29 oz/a		B		EPO <3" WDS			
7	Outlook	14 oz/a		B		EPO <3" WDS			
7	Select Max	9 oz/a		B		EPO <3" WDS			
7	NIS	0.15 qt/a		B		EPO <3" WDS			
7	N-pak ams	1.5 qt/a		B		EPO <3" WDS			
7	Liberty	29 oz/a		D		LPO (If Needed)			
7	N-pak ams	1.5 qt/a		D		LPO (If Needed)			
8	Liberty	29 oz/a		B		EPO <3" WDS	0.0 a	100.0 a	100.0 a
8	Pursuit	4 oz/a		B		EPO <3" WDS			
8	N-pak ams	1.5 qt/a		B		EPO <3" WDS			
8	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
8	Warrant	3 pt/a		C		MPO 10-14 (da epo)			
8	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
8	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a		A		PRE	0.0 a	100.0 a	100.0 a
9	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
9	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
9	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
9	Liberty	29 oz/a		D		LPO (If Needed)			
9	N-pak ams	1.5 qt/a		D		LPO (If Needed)			
10	Canopy	3.5 oz/a		A		PRE	0.0 a	100.0 a	100.0 a
10	Liberty	29 oz/a		C		MPO 10-14 (da epo)			
10	Select Max	9 oz/a		C		MPO 10-14 (da epo)			
10	NIS	0.15 qt/a		C		MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a		C		MPO 10-14 (da epo)			
10	Liberty	29 oz/a		D		LPO (If Needed)			
10	N-pak ams	1.5 qt/a		D		LPO (If Needed)			

Pest Type		W Weed	W Weed
Pest Code		SETFA	AMBTR
Pest Scientific Name		Setaria faberi	Ambrosia trifida
Pest Name		Giant foxtail	Giant ragweed
Crop Code	GLXMA		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max		
Crop Name	Soybean		
Crop Variety	Credeenz 3841 LL		
Description	LL		
Part Rated	PLANT C		
Rating Date	7-7-2015	7-7-2015	7-7-2015
Rating Type	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	60 19	60 19	60 19
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1
Days After Emergence	53 DE-1	53 DE-1	53 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	19	20	21
11	Authority MAXX	6.4 oz/a		A	PRE	0.0 a	100.0 a	100.0 a
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					0.0 a	100.0 a	100.0 a
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD P=.05						.	.	3.06
Standard Deviation						0.00	0.00	1.80
CV						0.0	0.0	2.01
Grand Mean						0.00	91.67	89.81
Bartlett's X2						0.0	0.0	0.679
P(Bartlett's X2)						.	.	0.41
Skewness						.	-3.1478*	-3.0073*
Kurtosis						.	8.3714*	7.7593*
Replicate F						0.000	0.000	0.162
Replicate Prob(F)						1.0000	1.0000	0.8513
Treatment F						0.000	0.000	755.608
Treatment Prob(F)						1.0000	1.0000	0.0001

Pest Type				W Weed	W Weed	W Weed		
Pest Code				AMARE	CHEAL	AMBEL		
Pest Scientific Name				Amaranthus ret>	Chenopodium al>	Ambrosia artem>		
Pest Name				Redroot pigweed	Common lambsqu>	Common ragweed		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Crop Variety								
Description								
Part Rated								
Rating Date				7-7-2015	7-7-2015	7-7-2015		
Rating Type				CONTRO	CONTRO	CONTRO		
Rating Unit				%	%	%		
Number of Subsamples				1	1	1		
Days After First/Last Applic.				60 19	60 19	60 19		
Plant-Eval Interval				61 DP-1	61 DP-1	61 DP-1		
Days After Emergence				53 DE-1	53 DE-1	53 DE-1		
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Description	22	23	24
1	UTC					0.0 b	0.0 b	0.0 b
2	Authority First	6.5 oz/a		A	PRE	100.0 a	100.0 a	100.0 a
	2 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	2 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	2 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	2 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
3	Fierce	3.5 oz/a		A	PRE	100.0 a	100.0 a	100.0 a
	3 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	3 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	3 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	3 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
4	Valor XLT @ 3.5 oz/ac					100.0 a	100.0 a	100.0 a
	4 Valor SX	2.05 oz/a		A	PRE			
	4 Classic	1.45 oz/a		A	PRE			
	4 Liberty	29 oz/a		B	EPO <3" WDS			
	4 Zidua	2 oz/a		B	EPO <3" WDS			
	4 Select Max	9 oz/a		B	EPO <3" WDS			
	4 NIS	0.15 qt/a		B	EPO <3" WDS			
	4 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
5	Liberty	29 oz/a		B	EPO <3" WDS	100.0 a	100.0 a	100.0 a
	5 Prefix	2 pt/a		B	EPO <3" WDS			
	5 N-pak ams	1.5 qt/a		B	EPO <3" WDS			
	5 Liberty	29 oz/a		C	MPO 10-14 (da epo)			
	5 Warrant	3 pt/a		C	MPO 10-14 (da epo)			
	5 Select Max	9 oz/a		C	MPO 10-14 (da epo)			
	5 NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
	5 N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			

Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	CHEAL	AMBEL
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name	Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	7-7-2015	7-7-2015	7-7-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	60 19	60 19	60 19
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1
Days After Emergence	53 DE-1	53 DE-1	53 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	22	23	24
6	Optill Pro					100.0 a	100.0 a	100.0 a
6	OpTill	2 oz/a		A	PRE			
6	Outlook	10 oz/a		A	PRE			
6	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
6	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
6	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
6	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
7	Envive @ 4 oz/ac					100.0 a	100.0 a	100.0 a
7	Valor SX	2.24 oz/a		A	PRE			
7	Classic	1.46 oz/a		A	PRE			
7	Thifensulfuron	0.229 oz/a		A	PRE			
7	Liberty	29 oz/a		B	EPO <3" WDS			
7	Outlook	14 oz/a		B	EPO <3" WDS			
7	Select Max	9 oz/a		B	EPO <3" WDS			
7	NIS	0.15 qt/a		B	EPO <3" WDS			
7	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
7	Liberty	29 oz/a		D	LPO (If Needed)			
7	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
8	Liberty	29 oz/a		B	EPO <3" WDS	100.0 a	100.0 a	100.0 a
8	Pursuit	4 oz/a		B	EPO <3" WDS			
8	N-pak ams	1.5 qt/a		B	EPO <3" WDS			
8	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
8	Warrant	3 pt/a		C	MPO 10-14 (da epo)			
8	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
8	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
8	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Authority MTZ	16 oz/a		A	PRE	100.0 a	100.0 a	100.0 a
9	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
9	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
9	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
9	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
9	Liberty	29 oz/a		D	LPO (If Needed)			
9	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
10	Canopy	3.5 oz/a		A	PRE	100.0 a	100.0 a	100.0 a
10	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
10	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
10	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
10	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
10	Liberty	29 oz/a		D	LPO (If Needed)			
10	N-pak ams	1.5 qt/a		D	LPO (If Needed)			

Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	CHEAL	AMBEL
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ambrosia artem>
Pest Name	Redroot pigweed	Common lambsqu>	Common ragweed
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	7-7-2015	7-7-2015	7-7-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	60 19	60 19	60 19
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1
Days After Emergence	53 DE-1	53 DE-1	53 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	22	23	24
11	Authority MAXX	6.4 oz/a		A	PRE	100.0 a	100.0 a	100.0 a
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
11	Liberty	29 oz/a		D	LPO (If Needed)			
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
12	Trivence @ 10 oz					100.0 a	100.0 a	100.0 a
12	Classic	1.56 oz/a		A	PRE			
12	Metribuzin	5.95 oz/a		A	PRE			
12	Valor SX	2.5 oz/a		A	PRE			
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)			
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)			
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)			
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)			
12	Liberty	29 oz/a		D	LPO (If Needed)			
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)			
LSD	P=.05					.	.	.
Standard Deviation						0.00	0.00	0.00
CV						0.0	0.0	0.0
Grand Mean						91.67	91.67	91.67
Bartlett's X2						0.0	0.0	0.0
P(Bartlett's X2)						.	.	.
Skewness						-3.1478*	-3.1478*	-3.1478*
Kurtosis						8.3714*	8.3714*	8.3714*
Replicate F						0.000	0.000	0.000
Replicate Prob(F)						1.0000	1.0000	1.0000
Treatment F						0.000	0.000	0.000
Treatment Prob(F)						1.0000	1.0000	1.0000

Pest Type				W Weed	W Weed	W Weed
Pest Code				POLPY	ABUTH	SIDSP
Pest Scientific Name				Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name				Pennsylvania s>	velvetleaf	Prickly sida
Crop Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Crop Variety						
Description						
Part Rated						
Rating Date				7-7-2015	7-7-2015	7-7-2015
Rating Type				CONTRO	CONTRO	CONTRO
Rating Unit				%	%	%
Number of Subsamples				1	1	1
Days After First/Last Applic.				60 19	60 19	60 19
Plant-Eval Interval				61 DP-1	61 DP-1	61 DP-1
Days After Emergence				53 DE-1	53 DE-1	53 DE-1
Trt Treatment	Other	Other	Appl			
No. Name	Rate	Rate	Unit Code Description	25	26	27 28
1 UTC				0.0 c	0.0 b	0.0 b
2 Authority First	6.5 oz/a		A PRE	100.0 a	100.0 a	100.0 a
2 Liberty	29 oz/a		C MPO 10-14 (da epo)			
2 Select Max	9 oz/a		C MPO 10-14 (da epo)			
2 NIS	0.15 qt/a		C MPO 10-14 (da epo)			
2 N-pak ams	1.5 qt/a		C MPO 10-14 (da epo)			
3 Fierce	3.5 oz/a		A PRE	99.3 b	100.0 a	100.0 a
3 Liberty	29 oz/a		C MPO 10-14 (da epo)			
3 Select Max	9 oz/a		C MPO 10-14 (da epo)			
3 NIS	0.15 qt/a		C MPO 10-14 (da epo)			
3 N-pak ams	1.5 qt/a		C MPO 10-14 (da epo)			
4 Valor XLT @ 3.5 oz/ac				100.0 a	100.0 a	100.0 a
4 Valor SX	2.05 oz/a		A PRE			
4 Classic	1.45 oz/a		A PRE			
4 Liberty	29 oz/a		B EPO <3" WDS			
4 Zidua	2 oz/a		B EPO <3" WDS			
4 Select Max	9 oz/a		B EPO <3" WDS			
4 NIS	0.15 qt/a		B EPO <3" WDS			
4 N-pak ams	1.5 qt/a		B EPO <3" WDS			
5 Liberty	29 oz/a		B EPO <3" WDS	100.0 a	100.0 a	100.0 a
5 Prefix	2 pt/a		B EPO <3" WDS			
5 N-pak ams	1.5 qt/a		B EPO <3" WDS			
5 Liberty	29 oz/a		C MPO 10-14 (da epo)			
5 Warrant	3 pt/a		C MPO 10-14 (da epo)			
5 Select Max	9 oz/a		C MPO 10-14 (da epo)			
5 NIS	0.15 qt/a		C MPO 10-14 (da epo)			
5 N-pak ams	1.5 qt/a		C MPO 10-14 (da epo)			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	ABUTH	SIDSP
Pest Scientific Name	Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name	Pennsylvania s>	velvetleaf	Prickly sida
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	7-7-2015	7-7-2015	7-7-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1 1
Days After First/Last Applic.	60 19	60 19	60 19
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1
Days After Emergence	53 DE-1	53 DE-1	53 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	25	26	27	28
6	Optill Pro					100.0 a	100.0 a	100.0 a	
6	OpTill	2 oz/a		A	PRE				
6	Outlook	10 oz/a		A	PRE				
6	Liberty	29 oz/a		C	MPO 10-14 (da epo)				
6	Select Max	9 oz/a		C	MPO 10-14 (da epo)				
6	NIS	0.15 qt/a		C	MPO 10-14 (da epo)				
6	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)				
7	Envive @ 4 oz/ac					100.0 a	100.0 a	100.0 a	
7	Valor SX	2.24 oz/a		A	PRE				
7	Classic	1.46 oz/a		A	PRE				
7	Thifensulfuron	0.229 oz/a		A	PRE				
7	Liberty	29 oz/a		B	EPO <3" WDS				
7	Outlook	14 oz/a		B	EPO <3" WDS				
7	Select Max	9 oz/a		B	EPO <3" WDS				
7	NIS	0.15 qt/a		B	EPO <3" WDS				
7	N-pak ams	1.5 qt/a		B	EPO <3" WDS				
7	Liberty	29 oz/a		D	LPO (If Needed)				
7	N-pak ams	1.5 qt/a		D	LPO (If Needed)				
8	Liberty	29 oz/a		B	EPO <3" WDS	100.0 a	100.0 a	100.0 a	
8	Pursuit	4 oz/a		B	EPO <3" WDS				
8	N-pak ams	1.5 qt/a		B	EPO <3" WDS				
8	Liberty	29 oz/a		C	MPO 10-14 (da epo)				
8	Warrant	3 pt/a		C	MPO 10-14 (da epo)				
8	Select Max	9 oz/a		C	MPO 10-14 (da epo)				
8	NIS	0.15 qt/a		C	MPO 10-14 (da epo)				
8	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)				
9	Authority MTZ	16 oz/a		A	PRE	100.0 a	100.0 a	100.0 a	
9	Liberty	29 oz/a		C	MPO 10-14 (da epo)				
9	Select Max	9 oz/a		C	MPO 10-14 (da epo)				
9	NIS	0.15 qt/a		C	MPO 10-14 (da epo)				
9	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)				
9	Liberty	29 oz/a		D	LPO (If Needed)				
9	N-pak ams	1.5 qt/a		D	LPO (If Needed)				
10	Canopy	3.5 oz/a		A	PRE	100.0 a	100.0 a	100.0 a	
10	Liberty	29 oz/a		C	MPO 10-14 (da epo)				
10	Select Max	9 oz/a		C	MPO 10-14 (da epo)				
10	NIS	0.15 qt/a		C	MPO 10-14 (da epo)				
10	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)				
10	Liberty	29 oz/a		D	LPO (If Needed)				
10	N-pak ams	1.5 qt/a		D	LPO (If Needed)				

Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	ABUTH	SIDSP
Pest Scientific Name	Persicaria pen>	Abutilon theop>	Sida spinosa
Pest Name	Pennsylvania s>	velvetleaf	Prickly sida
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	7-7-2015	7-7-2015	7-7-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1 1
Days After First/Last Applic.	60 19	60 19	60 19
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1
Days After Emergence	53 DE-1	53 DE-1	53 DE-1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	25	26	27	28
11	Authority MAXX	6.4 oz/a		A	PRE	100.0 a	100.0 a	100.0 a	
11	Liberty	29 oz/a		C	MPO 10-14 (da epo)				
11	Select Max	9 oz/a		C	MPO 10-14 (da epo)				
11	NIS	0.15 qt/a		C	MPO 10-14 (da epo)				
11	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)				
11	Liberty	29 oz/a		D	LPO (If Needed)				
11	N-pak ams	1.5 qt/a		D	LPO (If Needed)				
12	Trivence @ 10 oz					100.0 a	100.0 a	100.0 a	
12	Classic	1.56 oz/a		A	PRE				
12	Metribuzin	5.95 oz/a		A	PRE				
12	Valor SX	2.5 oz/a		A	PRE				
12	Liberty	29 oz/a		C	MPO 10-14 (da epo)				
12	Select Max	9 oz/a		C	MPO 10-14 (da epo)				
12	NIS	0.15 qt/a		C	MPO 10-14 (da epo)				
12	N-pak ams	1.5 qt/a		C	MPO 10-14 (da epo)				
12	Liberty	29 oz/a		D	LPO (If Needed)				
12	N-pak ams	1.5 qt/a		D	LPO (If Needed)				
LSD P=.05						0.56	.	.	.
Standard Deviation						0.33	0.00	0.00	.
CV						0.36	0.0	0.0	.
Grand Mean						91.61	91.67	91.67	.
Bartlett's X2						0.0	0.0	0.0	.
P(Bartlett's X2)					
Skewness						-3.147*	-3.1478*	-3.1478*	.
Kurtosis						8.3682*	8.3714*	8.3714*	.
Replicate F						1.000	0.000	0.000	
Replicate Prob(F)						0.3840	1.0000	1.0000	
Treatment F						22473.730	0.000	0.000	
Treatment Prob(F)						0.0001	1.0000	1.0000	

To demonstrate proper stewardship of Liberty by utilizing multiple effective MOA in a Liberty Link soybean program and support STOP weeds guidelines

Trial ID: 15 LIBPOST	Location: F-7 WEST END	Trial Year: 2015
Protocol ID: 15 LIBPOST	Investigator: Dr. Mark M. Loux	
Project ID: HP15USAWGB	Study Director: Bryan Reeb	
	Sponsor Contact: Dave Lamore, Bayer	

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, *Setaria faberi*, = US
 AMBTR, *Ambrosia trifida*, = US
 AMARE, *Amaranthus retroflexus*, = US
 CHEAL, *Chenopodium album*, = US
 AMBEL, *Ambrosia artemisiifolia*, = US
 POLPY, *Persicaria pensylvanica*, = US
 ABUTH, *Abutilon theophrasti*, = US
 SIDSP, *Sida spinosa*, = US

Crop Code

GLXMA, BSOY, *Glycine max*, = US

Part Rated

PLANT = plant
 C = Crop is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

28 DP-1 = 1 GLXMA 5-7-2015
 42 DP-1 = 1 GLXMA 5-7-2015
 61 DP-1 = 1 GLXMA 5-7-2015